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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/626,496

07/24/2003

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EXAMINER

WONG, XAVIER S

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/626,496

Applicant(s)

BONICATTO ET AL.

Examiner

Xavier S Wong

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2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24<sup>th</sup> July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24<sup>th</sup> July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓  
Paper No(s)/Mail Date See Continuation Sheet.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :25th April 2005, 25th August 2005, 30th October 2006 and 13th November 2006.

## DETAILED ACTION

### *Information Disclosure Statements*

The information disclosure statements submitted on 25<sup>th</sup> April 2005, 25<sup>th</sup> August 2005, 30<sup>th</sup> October 2006 and 13<sup>th</sup> November 2006 have been considered by the Examiner and made of record in the application file.

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (e.g. carrier-wave readable, data packet). When nonfunctional descriptive material is recorded on some *computer-readable* medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., *abstract ideas*, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”). Such a result would exalt form over substance. In re *Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) (“[E]ach invention must

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be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under § 101, the claimed invention, as a whole, must be evaluated for what it is." (quoted with approval in *Abele*, 684 F.2d at 907, 214 USPQ at 687). See also *In re Johnson*, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting"). Thus, nonstatutory music is not a computer component, and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 recites the limitation "...interrupted by the prescheduled transmission of an alternative data packet" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by **Ouellette (U.S Pat 5,495,239)**.

Consider claim 1, **Ouellette** discloses a bi-directional communication system within an electrical power distribution system (col. 7 ln. 61-64; *abstract*) that connects endpoints (metering devices 16) that comprise transceivers and connects to a power distribution line 17 (col. 6 ln. 21-23; col. 8 ln. 50-51; fig. 2 items 16 & 17); the endpoints are identified by a predetermined address/unique I.D (col. 9 ln. 1-5) in the power distribution system comprising: transformers + mobile nodes 12 & 22 (as substations) coupled to power lines 17 in the system (col. 4 ln. 32-37; fig. 2 items 12, 17 & 22); the substations (mobile node portion) comprise a circuit/microprocessor 32 as shown in figure 3 that translates radio frequency signals in a band(width) bi-directionally with the metering devices to track and map source and destination addresses/I.Ds in a "find endpoint" packet shown in figure 5 items 30a/b (col. 3 ln. 23-25; col. 7 ln. 59-67; col. 8 ln. 62-67; col. 9 ln. 3-10); the substation mobile node portion acts as a "passthrough" for any incoming metering devices frequency signals (therefore, indicating a *receiving* status in a frequency bandwidth), then translates (*status assignment*) the frequency signals for sending (col. 3 ln. 23-25; col. 7 ln. 27-39; col. 8 ln. 2-8).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ouellette (U.S. Pat 5,495,239)** in view of **Ardalan et al (U.S. Pat 6,900,737 B1)**.

Consider claim 2, and as applied to claim 1, **Ouellette** discloses the claimed invention including transmitting packet with a unique I.D and an assigned frequency bandwidth to the endpoint transceiver. However, **Ouellette** may not have explicitly mentioned determining whether the substation stopped receiving a signal; and the

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substation retransmitting the find endpoint packet. **Ardalan et al** disclose a gateway portion for a power meter reading system (as substation) retransmit SMS packets to meters (endpoints) if no responses are received from the meters, and therefore, the gateway sends out SMS (find) packets until a response is received (col. 2 ln. 11-14; col. 5 ln. 61-66; col. 6 ln. 13-17). It would have been obvious to one of ordinary skill in the art to incorporate the teachings of retransmitting a "find endpoint" packet as taught by **Ardalan et al**, in the system of **Ouellette**, for acknowledgement purpose. The system of **Ardalan et al** also disclose the ability to schedule times when the meters will be active and respond to SMS packets (col. 2 ln. 16-17); therefore, it is obvious to recognize the ability to determine whether a substation stops receiving signals from the endpoints as taught by **Ardalan et al**, in the system of **Ouellette**, for avoiding signal collision.

Consider claim 6, and as applied to claim 2, **Ouellette**, as modified by **Ardalan et al**, discloses a mobile node (at a second location) with microprocessor circuit (fig. 2 item 24) may be coupled to a second transformer (second power distribution substation transceiver) at a second location according to the multiple transformers 12 shown in figure 1 (col. 5 ln. 16-24); wherein the mobile node portion through instructions of a system control center (control server) of the substation combination may communicate with a first or second power distribution substation/transformer (col. 5 ln. 7-24; claim 16). Since **Ouellette**'s mobile node portion can receive instructions from a system control center *as explained above*, it can instruct a first or second transceiver to map unique I.Ds of any endpoints/meters to a base frequency and bandwidth (col. 3 ln. 23-25; col. 9 ln. 1-5); transmit a "find endpoint" packet with the I.D for the endpoint/meter



(col. 8 ln. 62-67); assigning status to a base frequency upon receiving signal from the endpoint/meter (translation of frequency signals) either the first or second substation transceiver (col. 8 ln. 2-8) and since the substation mobile node portion acts as a "passthrough" for any incoming metering devices frequency signals, it is indicating a *receiving* status in a frequency bandwidth (col. 7 ln. 27-39). Though **Ouellette** may not have explicitly mentioned during a communication loss between an endpoint and a first power distribution substation transceiver, it would have been obvious to one of ordinary skill in the art to recognize the ability to substitute a first substation transceiver's tasks during a communication loss by a second substation transceiver (one mobile node serving both transceivers) through an electrical load <sup>14</sup> other than a (failed) transformer <sup>12</sup> as long as the mobile node is in the power distribution system (col. 6 ln. 66-67; col. 7 ln. 1-3).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ouellette (U.S. Pat 5,495,239)** in view of **Fischer (U.S. Pat 5,502,726)**.

Consider claims 3 and 4, and as applied to claims 1 and 3, **Ouellette** disclose the claimed invention including the substation transceiver and the endpoint unique I.D. However, **Ouellette** may not have explicitly mentioned the transceiver repeatedly transmit the "find endpoint" packet in a *one minute predetermined interval* until the transceiver receives a signal from the endpoint. **Fischer** discloses a (transmit/receive) station that retransmits any unacknowledged packets repeatedly in one-minute retry cycles until a session (reply) is successfully established (col. 37 ln. 24-36). It would have been obvious to one of ordinary skill in the art to incorporate the teachings of a

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transceiver repeatedly transmit a "find endpoint" packet in a one minute predetermined intervals until the transceiver receives a signal from the endpoint as taught by **Fischer**, in the system of **Ouellette**, for acknowledgement purpose.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ouellette** (U.S. Pat 5,495,239) in view of **Fischer** (U.S. Pat 5,502,726) and in further view of **Sipola** (U.S. Pub 2004/0105386 A1).

Consider claim 5, and as applied to claim 3, **Ouellette**, as modified by **Fischer**, discloses the claimed invention including the substation transceiver to repeatedly transmit the "find endpoint" packet in a predetermined interval. However, **Ouellette**, as modified by **Fischer**, may not have explicitly mentioned the repeated transmission of packet being interrupted only by a prescheduled transmission of an alternative packet. **Sipola** discloses a scheduler that interrupts a current (may be a repeated flow) data packet flow due to another retransmission data packet flow with higher priority (therefore, prescheduled) described in paragraph 0056. It would have been obvious to one of ordinary skill in the art to incorporate the teachings of a repeated transmission of packet being interrupted only by a prescheduled transmission of an alternative packet as taught by **Sipola**, in the system of **Ouellette**, as modified by **Fischer**, for improving multi-flow transmission over a single resource.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Grindahl et al (U.S Pat 4,799,059)** in view of **Ouellette (U.S Pat 5,495,239)**.

Consider claim 7, **Grindahl et al** disclose in the *abstract* an automatic/remote instrument (meter) monitoring device for electricity consumption (therefore, power distribution) (col. 6 ln. 53-56; col. 12 ln. 9-10) connected to a transponder (with circuit and readable-medium/registers; col. 3 ln. 8-10; col. 7 ln. 17-34; fig. 5) that transmits RF activation signals in the form of a tone modulated onto a carrier (wave); information packet signals are transmitted at pseudorandom (unique for each meter) frequency bandwidth as a Manchester encoded (string) bit stream (col. 3 ln. 20-25) including an instrument identification field corresponding to each meter (col. 3 ln. 48-51). A transmitter activator in a mobile node/vehicle transmits polling signals (as find command) to the transponders connected to the meters as the transponders send information packets back to the activator in their respective frequencies and bandwidths (col. 5 ln. 3-33/59-60; fig. 1). However, **Grindahl et al** may not have explicitly mentioned the carrier wave is transmitted over a power distribution line, **Grindahl et al** utilizes radio. **Ouellette** disclose transmission involving power lines (col. 4 ln. 32-37; fig. 1 items 12, 16 and *power lines*). It would have been obvious to one of ordinary skill in the art to incorporate the teachings of a carrier wave is transmitted over a power distribution line as taught by **Ouellette**, in the packet of **Grindahl et al**, for avoiding noise in radio transmissions.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A.) **James (U.S Pat 4,700,188)** discloses a central location that provides storage of data from all power meters even in the event of power outage.

B.) **Piercy et al (U.S Pat 6,388,564 B1)** disclose a power distribution grid communication system.

C.) **Welles, II et al (U.S Pat 6,737,984 B1)** disclose an automatic meter reading system for utility meters.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be **brought to:**

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Wong whose telephone number is (571) 270-1780. The examiner can normally be reached on Monday through Friday 8 am - 5 pm (EST).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

*Xavier S Wong*  
X.S.W / x.s.w  
26<sup>th</sup> June 2007

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